

REMARKS

The examiner has maintained his rejection under 35 USC 103 that the present invention is obvious over the prior art of Witt in view of Tol and further in view of Bo. The examiner is urged to reconsider and withdraw his rejection. The present invention is directed towards preventing a client of a storage system from modifying or deleting a data item that the client itself deposited, at any time when this is disallowed by preset rules. This is accomplished using a storage system that is both distributed and fault tolerant, with the preset rules enforced independently at redundant storage sites. Both the absolute character of the data protection and the distributed but fault tolerant nature of the storage system that enforces the rules are essential elements of the present invention that are completely absent from the cited art.

The examiner argues that Witt implies the first of these elements when a user installs an operating system and then uses the Witt mechanism, saying "There are certain files that even though the user installed them with the os the user will nonetheless be unable to override the protection of the files (See Witt column 2 5 -10). In most cases this is a desired outcome since modification to some system files will result in loss of performance by the system (See Witt column 1 lines 40-50)." We maintain that this very example shows that the Witt mechanism does not provide the required protection. In particular the clause of claim 62 that recites "wherein no request sent by the client program can enable deletion to occur in violation of the restriction caused by the first request" is not satisfied. For clearly, if the client can reinstall the operating system, this involves deleting all operating system files, in violation of the restriction. In fact, Witt explicitly states (column 8, lines 53 through 57) that "it is possible for a user to override the file protection service", in explaining why a scan utility is necessary.

Witt also fails to disclose a mechanism for providing the level of protection contemplated here, which involves using a "distributed data storage system", "sharing, among the plurality of storage sites a set of rules that restrict deletion of the entity version", "wherein the independent application of the shared set of rules at each of the plurality of storage sites is designed to prevent alterations or corruptions of the operation at a one of the plurality of storage sites from allowing the entity version to be deleted or modified at another of the plurality of storage sites in violation

of the restriction on the deletion of the entity version” and “wherein the plurality of storage sites communicate with one another over the network in order to achieve fault tolerance against the loss of storage sites”. Notice that the storage sites communicate to maintain fault tolerance, but nevertheless independently enforce the shared rules. There is no such mechanism disclosed in Witt or the other cited art.

Thus the independent claim 62 is allowable over the art of record. Except for slight clarifications in the language of claim 62, and a corresponding change to the language of dependent claim 173, the only other change is the addition of one new dependent claim, claim 186, which reflects the limitation expressed in the last sentence of paragraph [0096] of the published application, US20040167938.

All claims other than 62 are properly dependent on claim 62 and hence are allowable therewith. Each of the dependent claims adds one or more further limitations to claim 62 that enhance patentability, but those limitations are not presently relied upon. For that reason, and not because applicants agree with the examiner, no rebuttal is offered to the examiner's rejections of the dependent claims.

Allowance of the application is requested.

Please apply any other charges or credits to deposit account 06-1050.

Respectfully submitted,

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